

REMARKS

Claim 41 has been added. Claims 11-20, 22-24 and 38-41 are pending and under consideration. Proper support for newly presented claim 41 can be found in the specification at least at paragraph [0105]. No new matter is believed to have been added.

Newly added claim 41 is believed to be allowable since the prior art of record fails to teach or fairly suggest, at least, a method of preparing a positive active material for a rechargeable lithium battery comprising: coating at least one lithiated compound having an average diameter of 10µm with an organic solution of coating material source or an aqueous solution of coating material source to produce a coated lithiated compound.

REJECTIONS UNDER 35 U.S.C. §103:

Claims 11-20, 22-24 and 38-40 are rejected under 35 U.S.C. §103(a) as being unpatentable over JP 9-171813 in view of Maegawa et al. (U.S. Patent 6,383,235).

Applicants respectfully traverse this rejection for at least the following reasons.

Regarding the rejection of independent claim 11, it is noted that claim 11 recites a method of preparing a positive active material for a rechargeable lithium battery comprising, amongst other novel features, drying the coated lithiated compound at a temperature of approximately 60°C to 100°C forming a surface treatment layer on the coated lithiated compound without further heat-treating the dried coated lithiated compound.

The Office Action relies on JP '813 for the teachings of independent claim 11, and indicates that JP '813 teaches drying the coated compound at a temperature of 120°C for 2 hours (see [0036]). However, a detailed review of JP '813 and paragraph [0036] recite that the powder of LiCoO₂ and the aluminum-hydroxide composite at not dried at 120°C for 2 hours but are rather dried at more than 120°C for 2 hours.

Accordingly, JP '813 discloses a method of preparing a positive active material by drying a lithiated compound at more than 120°C for 2 hours (see [0036]).

MPEP 2144.05 recites that "A *prima facie* case of obviousness may also be rebutted by showing that the art, in any material respect, teaches away from the claimed invention. *In re*

Geisler, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997).

In the instant case, JP '813 does not teach or suggest any reason why one of ordinary skill would want to dry the lithiated compound at a temperature lower than 120°C, as suggested by the Examiner. In other words, JP '813 provides no motivation for drying the compound at the claimed temperature of approximately 60°C to 100°C.

Therefore, since JP '813 has not provided any motivation to dry the compound at the claimed range and rather teaches drying the compound at a much higher temperature, JP '813 has not established a *prima facie* case of obviousness.

Maegawa on the other hand is relied on for a teaching of a method for forming a cathode material by spray-drying. Maegawa however, fails to teach or suggest drying or spray-drying the coated lithiated compound at a temperature of approximately 60°C to 100°C, as recited in independent claim 11, and thus fails to cure the deficiencies of JP '813.

Additionally, it is noted that Maegawa teaches that the atmospheric temperature in the spray-drying is from 160 to 220°C, and preferably from 180 to 200 °C. Maegawa further states that if the temperature is less than 160°C, the precursor is insufficiently dried, and remaining or crystalline water and moisture absorption are marked. If the temperature is more than 220°C, the produced composite complex goes ahead with a reaction at a stretch up to the heat composition to turn to a highly hygroscopic oxide and, therefore not only the desired object of homogenous mixing cannot be achieved, but also the yield of the precursor is lowered and handling is also remarkably lowered (column 6, lines 39-49). In other words, Maegawa teaches drying the compound at a temperature from 160 to 220°C, preferably from 180 to 200 °C, which is much higher than the temperature suggested by JP '813 and almost twice the temperature recited in independent claim 11.

Maegawa provides no motivation for drying the compound at a temperature lower than 160°C and as a matter of fact notes various drawbacks when drying the compound at a temperature lower than the 160°C (column 6, lines 39-49).

As noted above, JP '813 simply states drying the compound at a temperature of more than 120°C but provides no motivation for drying the compound at the temperature disclosed by Maegawa, which would be necessary for the references to be combinable. Accordingly, there is no motivation to combine the references.

Therefore, given the fact that JP '813 provides no motivation why one of ordinary skill in the art would want to dry the compound at a temperature of approximately 60°C to 100°C coupled with the fact that Maegawa clearly teaches a range far above the one recited in the claim, leads to the conclusion that the Examiner is relying on hindsight to teach the features of independent claim 11.

As noted by MPEP 2143.01, an unsubstantiated statement that existing elements could be combined as it was in the skill of the art to do so does not provide a basis for a rejection under 35 U.S.C. 103(a). Instead, in order to establish a prima facie case for obviousness, the rejection must detail the existence of the individual elements at the time of invention, that there was an existing motivation to combine these elements contained in the then existing art, and that this motivation is beyond an unsupported statement that the combination of these elements was within the skill of the art. In essence, there needs to be proof that such a motivation exists, not conjecture. This rigorous proof is required in order to prevent the trap of impermissible hindsight.

Accordingly, Applicants respectfully assert that the rejection of claim 11 under 35 U.S.C. § 103(a) should be withdrawn because neither JP '813 nor Maegawa, whether taken singly or combined, teach or suggest each feature of independent claim 11. Therefore, it is respectfully submitted that claim 11 distinguishes over the prior art.

Regarding the rejections of independent claims 38-40, it is noted that these claims recite substantially similar subject matter as claim 11. Thus, the rejections of these claims are also traversed for the reasons set forth above.

Furthermore, Applicants respectfully assert that the rejection of dependent claims 12-20 and 22-24 under 35 U.S.C. § 103(a) should be withdrawn at least because of their dependence from claim 11 and the reasons set forth above, and because the dependent claims include additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 12-20 and 22-24 also distinguish over the prior art.

DOUBLE PATENTING

Claims 11-20, 22-24, and 38-40 are rejected under judicially created doctrine of obviousness-type double patent as being unpatentable over the claims of U.S. Patent Nos.

6,753,111, 6,797,435, and 6,846,592 in view of Maegawa.

Since claims 11-20, 22-24 and 38-40 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer would be premature (see MPEP 804).

Claims 11-20, 22-24, and 38-40 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of copending Application No. 10/944,892.

Since claims 11-20, 22-24 and 38-40 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer would be premature (see MPEP 804).

RESPONSE TO ARGUMENTS:

The Office Action states that the temperature disclosed in the reference appears to be merely exemplary and the artisan would be sufficiently skilled to reduce the drying temperature to affect the composition and crystal structure of the surface coating.

Applicants respectfully traverse such characterization. Applicants note that the reference itself, Maeda, notes various drawbacks when drying the compound at a temperature lower than the 160°C (column 6, lines 39-49). Accordingly, the temperature disclosed in the reference is not merely exemplary as alleged in the Office Action.

Furthermore, the Office Action states that the artisan would be motivated to perform the drying step at a temperature as low as possible while still obtaining the desired results in order to save energy during the drying process and thus, economic incentive provides sufficient motivation to arrive at the claimed temperature range.

Applicants respectfully traverse this characterization for the following reason.

As a general matter, in order to establish a prima facie obviousness rejection, the Examiner needs to provide both the existence of individual elements corresponding to the recited limitations, and a motivation to combine the individual elements in order to create the

recited invention. Both the individual elements and the motivation need to be shown to have existed in the prior art. Should the Examiner fail to provide evidence that either one of the individual elements or the motivation does not exist in the prior art, then the Examiner has not provided sufficient evidence to maintain a prima facie obviousness rejection of the claim. MPEP 2143.03.

In the instant case, the motivation provided in the Office Action is not found in the prior art. Accordingly, Applicants once again note that the Office Action has failed to establish a case of prima facie obviousness.

INTERVIEW:

In the interest of expediting prosecution of the present application, Applicants respectfully request that an Examiner interview be scheduled and conducted. In accordance with such interview request, Applicants respectfully request that the Examiner, after review of the present Amendment, contact the undersigned local Washington, D.C. area attorney at (202) 216-9505 for scheduling an Examiner interview, or alternatively, refrain from issuing a further action in the above-identified application as the undersigned attorneys will be telephoning the Examiner shortly after the filing date of this Amendment in order to schedule an Examiner interview. Applicants thank the Examiner in advance for such considerations. In the event that this Amendment, in and of itself, is sufficient to place the application in condition for allowance, no Examiner interview may be necessary.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

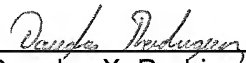
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

STEIN, MCEWEN & BUI, LLP

Date: 10/31/07

By: 
Douglas X. Rodriguez
Registration No. 47,269

1400 Eye St., N.W.
Suite 300
Washington, D.C. 20005
Telephone: (202) 216-9505
Facsimile: (202) 216-9510